

In the Drawings:

Kindly accept and enter the attached replacement drawing sheet.

### REMARKS

The Applicant appreciates Examiner's thorough review of the Application.

Reconsideration and allowance are requested.

A replacement drawing sheet with --PRIOR ART-- legends by Figures 6 and 7 has been submitted. This should overcome the objection to the drawings.

Claim 1 has been amended to clarify that the small silicon spring electrodes are inside the soft plastic sheet and do not extend out of the soft plastic sheet during operation, as shown in Figures 2 and 3 and as supported at Page 8, lines 4-8 of the Specification ("Since the size of through holes formed in the silicone rubber sheet 2 is slightly smaller than the size of the silicon spring electrode 1, the silicon spring electrode 1 is clamped by the silicone sheet 2 and fastened to the through hole so that the silicon spring electrode does not come out of the hole.").

Independent Claim 1 remains pending in the Application.

Claim 1 is patentable under 35 U.S.C. 103(a) over Takayama et al. (U.S. 5,188,702) in view of Nakamura et al. (JP 2003-121468) and Kovacs et al. ("Bulk Micromachining of Silicon").

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations." *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (emphasis added).

"Bulk Machining of Silicon" disclosed by Kovacset al. has been a well-known technology to manufacture a silicon spring. However, nobody had thought of an idea to insert the silicon spring into a soft plastic sheet before the present invention was made. The Examiner argues that "It would have been obvious to one having skill in the art at the time the invention to modify the invention of Takayama et al. with using silicon spring electrodes, as taught by Nakamura et al., so as to maintain a more stable electrical conduction."

However, the springs disclosed by Nakamura et al. have the following problems:

1) The springs are formed in a long wave-patterned shape as shown in FIG. 1 and FIG. 3 and the springs are partially fixed in the through tubes 21 of the substrate 22 by the adhesives 23 (see FIG. 1). As a result, since only parts of the long springs are fixed to the substrate 20, it is difficult to keep the spring standing upright particularly when the springs are pushed in a slanting direction.

2) Because of the long springs are employed, the structure of the electrode probe is rather complicated and requires several components (IC attachment substrate 1, electrodes 2, 8, springs 22, substrate 22).

On the other hand, since the silicon springs of the present invention are completely buried in the soft plastic sheet, the springs can be kept upright when the springs are pushed in a slanting direction and deformations of the springs are absorbed by the surrounding plastic sheet. Therefore, although the anisotropic conductive sheet has a rather simple structure, it stably works. Further, it is another advantage of the present invention that the springs are held firmly by the elastic soft plastic sheet without using adhesives.

Therefore Claim 1 is distinguished from the references at least in that it teaches that the spring electrodes are clamped to the soft plastic sheet and do not extend out of the holes during

operation. These features are not taught or suggested by the references. Takayama teaches metallic bumps that extend out of holes and are fixed in an insulating film by, for example, double-headed rivets. Nakamura teaches the use of adhesive to secure long springs at their middle to base board 20.

No reference teaches the use of leaf spring electrodes larger than their corresponding holes so that they are clamped in place by a soft plastic sheet itself. No reference teaches the use of leaf spring electrodes that are entirely within a soft plastic sheet during operation. Therefore the references, taken alone or in combination, do not teach or suggest each and every claim limitation. Therefore Claim is not obvious over the references and is patentable under 35 U.S.C. 103(a).

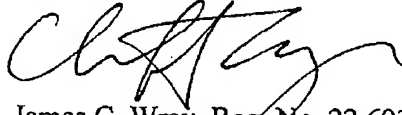
Furthermore, due to the deficiencies noted in Nakamura, there would have been no motivation to combine the teachings of Nakamura with Takayama.

For at least the above reasons, the rejection of Claim 1 under 35 U.S.C. 103(a) over Takayama in view of Nakamura and Kovacs is improper and should be withdrawn.

**CONCLUSION**

Reconsideration and allowance of all claims are respectfully requested.

Respectfully,



James C. Wray, Reg. No. 22,693  
Clifford D. Hyra, Reg. No. 60,086  
1493 Chain Bridge Road, Suite 300  
McLean, Virginia 22101  
Tel: (703) 442-4800  
Fax: (703) 448-7397

Date: March 17, 2008